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**MONITORING WELL INSTALLATION
AND SAMPLING REPORT**

**WILSON MOVING AND STORAGE
129 STRONGS AVENUE
RUTLAND, VERMONT**

(VT DEC SITE #96-2063)
GI #9964919

December 10, 1996

Prepared for

WILSON MOVING AND STORAGE
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Prepared by



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I. INTRODUCTION

This report summarizes the investigation of subsurface petroleum contamination at the former Wilson Moving and Storage facility on Strongs Avenue in Rutland, VT. This work has been conducted by Griffin International, Inc. (Griffin), for Mr. Reginald Wilson of Wilson Moving and Storage. This work was requested by Mr. Chuck Schwer of the Vermont Department of Environmental Conservation (VT DEC) in a letter to Mr. Reginald Wilson dated October 23, 1996. This work was performed under the Site Investigation Expressway procedure, in accordance with the October 29, 1996 *Preliminary Work Plan/ Cost Estimate for Subsurface Investigation of Suspected Petroleum Contamination* for the site prepared by Griffin.

II. SITE BACKGROUND

A. Site History

On September 30, 1996 petroleum contamination was detected at the Wilson Moving and Storage site during soil field screening at a routine No. 2 fuel oil underground storage tank (UST) removal. The former UST had a capacity of 10,000 gallons and was constructed of single wall steel. Related piping between the UST and the pump island were also removed. The piping was two inch diameter, steel, single wall pipe. The UST and the piping were 23 years old, and reported to be in good condition at the time of closure.

Soil samples collected during the UST removal were screened for volatile organic compounds (VOCs) using an HNuTM systems Model PI 101 photo ionizing detector (PID). Readings of 0.3 to 135 parts per million (ppm) were detected in soils collected from the bottom of the former UST pit. No VOCs were detected above background in the soils surrounding the piping. The source of the petroleum release(s) was identified in the tank pull report as likely being the result of the accumulation of small spills and overfills that typically occur over the years.

One four inch diameter monitoring well was observed to exist at the time of the UST removal. The monitoring well was reported to be installed in 1973, at the same time the former UST was installed. The monitoring well is located between the building and the former UST, and is designated as MW1 on the Site Map (Appendix A).

As a result of the petroleum contamination detected in the subsurface beneath the former UST, the VT DEC requested that additional work be conducted at the site in order to determine the extent and degree of petroleum contamination.

B. Site Description

The Wilson Moving and Storage facility consists of one building that was used to garage moving trucks. The property is located at 129 Strongs Avenue in Rutland, VT (see the Site Location Map in Appendix A). Currently the building is used to garage Vermont Transit buses. Property uses in the area are primarily residential and commercial. All buildings in the vicinity are serviced by municipal water and sewer systems.

C. Site Geology

Soils in the vicinity of the UST pit during the removal inspection consisted of medium to fine sand and silt with some gravel from grade to approximately 11 feet below grade, over very fine sand and clay. Some construction debris and black stained coal-like material were also encountered in the excavation. According to the Surficial Material of the Rutland-Brandon Region Map (Ref. 1), the site is underlain by lacustrine sands and gravels. Bedrock below the site is mapped as Dunham dolomite (Ref. 1).

III. INVESTIGATIVE PROCEDURES

To further define the extent of subsurface petroleum contamination in the area of the former UST, the following investigative tasks were undertaken: soil borings; monitoring well installations; and groundwater sample collection and analyses for petroleum related constituents. Additionally, an evaluation of potentially sensitive receptors was conducted.

A. Monitoring Well Installation

Three monitoring wells were installed on November 20, 1996, by Adams Engineering, under the direct supervision of a Griffin hydrogeologist. The soil borings were advanced with a truck mounted vibratory soil core sampler. The soil boring logs and monitoring well as-built specifications are presented in Appendix B. The monitoring well locations are indicated on the Site Map (Appendix A).

At the time of the UST removal, groundwater was estimated to flow to the south-southeast. Monitoring well MW2 was installed south of the former UST, in a presumed downgradient direction. Monitoring well MW3 was installed east of the former UST, in a presumed cross to downgradient direction. Monitoring well MW4, was installed north of the former UST and near the piping dispenser trench, in a presumed upgradient direction.

Undisturbed soil samples, collected from the boring with the sampler, were logged by the supervising hydrogeologist and screened for the presence of volatile organic compounds (VOCs) using an HNu™ systems Model PI 101 photo ionizing detector (PID). Soils were screened using the Griffin Jar/Polyethylene Bag Headspace Screening Protocol, which conforms to state and industry standards. A reading of 0.2 part per million (ppm) was detected from soils near the surface in the boring for MW2. Readings of 0.2 ppm to 2.0 ppm were measured in the soils from MW3, with the highest reading at depths of 10-13 feet. Readings of 0.4 ppm to 30.0 ppm were measured in the soils from MW4, with the highest reading at depths of 10-15 feet.

Soils encountered in the borehole for MW2 consisted primarily of sands from grade to 7.5 feet below grade. This was underlain by silt with some gravel to the bottom of the boring at 15 feet below grade. The soils encountered in the borehole for MW3 consisted primarily of sands and gravels from grade to 10 feet below grade. This was underlain by silt to the bottom of the boring at 15 feet below grade. The soils encountered in the boring for MW4 consisted of gravels, sands, and silt from grade to seven feet below grade. This was underlain by silt with some sand and gravel to the bottom of the boring at 15 feet below grade.

During drilling, the water table was encountered at 8.8 feet below grade in MW2, at 9.5 feet below grade in MW3, and 8.5 feet below grade in MW4. On the day of the drilling, the water table was measured at 7.5 feet below grade in MW1. The water table was used as a guide for determining the placement of the screened interval. The wells were screened from approximately five feet above the water table to five feet below the water table, to allow for seasonal fluctuations in the water table.

The monitoring wells are constructed of 1.5 inch diameter, schedule 40 PVC, with a 10 foot length of 0.010 inch slotted screen. With the vibratory method of drilling, the monitoring well is installed in the open borehole, following removal of the sampler. Often, as was observed during the installation of the three monitoring wells, the borehole will collapse in saturated zones. In these situations, the monitoring well was vibrated into place through the collapsed native material. A sandpack was placed in the annulus between the monitoring well and the borehole wall, from the top of the collapsed material to approximately 1.5 feet below grade. Above the sand pack, the annulus was filled with a 0.5 foot thick bentonite clay grout seal to prevent surface water from entering the borehole. The well was protected at the surface by a flush mounted steel well head protective casing and a bolt down cover. The well head protection casing was set in cement.

The monitoring wells were developed immediately following installation with a peristaltic pump and dedicated tubing. Development was limited on MW2 due to the low recharge rate of groundwater to this well. Monitoring wells MW3 and MW4 developed with a clean flow.

B. Groundwater Flow Direction and Gradient

Water table elevation measurements were collected from all four monitoring wells prior to sampling on November 26, 1996. The top of casing elevations were determined relative to MW-2, which was arbitrarily set at 100 feet. The depth to water in each well was subtracted from the top of casing elevation to obtain the relative water table elevation in each well. Water level data are presented in Appendix C.

Water table elevations have been plotted and contoured to illustrate the estimated gradient and direction of groundwater flow beneath the site (see Groundwater Contour Map, Appendix A). According to these data, it appears that the on-site groundwater flow is generally to the east at a hydraulic gradient of 5.2%. This flow direction is toward Moon Brook, and is most likely controlled by the surface topography in the immediate area. This flow direction is more to the east than had been estimated based on the proximity of Moon Brook and its southwesterly flow direction. Given the easterly flow direction, it appears that monitoring well MW2 is located in a crossgradient position, MW3 is located downgradient, and MW4 is cross and downgradient with respect to the former UST location. The original monitoring well, MW1, is located in an upgradient direction.

C. Groundwater Sampling and Analyses

Griffin collected groundwater samples at the site from MW1, MW2, MW3, and MW4 during the site visit on November 26, 1996. Groundwater samples were analyzed by Endyne, Inc. of Williston, Vermont, by EPA Method 8020 for the presence of benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE). Results of the laboratory analyses for the monitoring wells are summarized in Appendix D. The laboratory analysis report is also in Appendix D. Analytical results of the trip blank and duplicate samples indicate that adequate quality assurance and control were maintained during sample collection and analysis.

No petroleum compounds were detected in the groundwater sample collected from MW1.

Low concentrations of benzene and xylenes were detected, above their respective groundwater standards, in the sample collected from MW4. Ethylbenzene and toluene were also detected in this sample at concentrations below groundwater standards.

Low concentrations of toluene were detected in the sample collected from MW2 and MW3, below the applicable groundwater standard for this compound. It has come to Griffin's attention that there was a release of toluene at the TIMCO factory where these well screens were manufactured. Griffin believes that the low levels of toluene detected in MW2 and MW3 are the result of factory contaminated PVC well screen and riser pipe.

Supporting evidence for this position are:

- Only toluene and no other petroleum related constituents were detected in MW2 and MW3. Petroleum contamination typically results in detection of groups of BTEX constituents.
- There is no identified on-site or off-site upgradient non-petroleum source of toluene.
- Toluene detections were apparent in the two 1.5 inch wells constructed with TIMCO supplied screen and riser (MW2 and MW3) but not in the previously existing four inch PVC well (MW1) presumably constructed of well materials from another supplier.
- Another consultant in Vermont has indicated that samples collected from monitoring wells installed with TIMCO supplied well screen and riser have had detections of toluene in the range of 75 to 100 ppb.

The toluene detected in the sample collected from MW4 is suspect, but can not be totally discounted due to the presence of other petroleum compounds.

D. Sensitive Receptor Survey

A receptor risk assessment was conducted to identify known and potential receptors of the contamination detected at the Wilson Moving and Storage facility. A visual survey was conducted at the time of the monitoring well installations, as well as during the UST removal inspection. Based on these observations, a determination of the potential risk to identified receptors was conducted.

The entire area is served by municipal water and sewer systems. No in-use public or private water supply wells were identified in the vicinity of the site, based on visual observation and interviews with site representatives. The nearest surface water is Moon Brook which borders the site on the southeast. No visual signs of petroleum impact were observed on the day of the UST removal or on the day of monitoring well installation. Moon Brook flows to the south-southwest, and joins Otter Creek approximately 0.75 mile from the site.

The site is bordered on the northeast by Strongs Avenue. Immediately across the street is a TV/VCR repair shop. The basement of the repair shop was surveyed with an HNu™ PID on November 20, 1996. No VOC readings were detected during the survey. No complaints have been reported of petroleum odors within the building. The site is bordered to the southwest by multiple railroad tracks and the Howe Industrial Park, and to the northwest by an empty lot.

IV. CONCLUSIONS

Based on the results of this sampling event, and on observations made during previous site visits, Griffin presents the following conclusions:

- 1) There was a release(s) of No. 2 fuel oil to the subsurface from the former UST system.
- 2) The total volume of the release(s) is unknown.
- 3) The source of the petroleum contamination (i.e., the UST system) was removed in September 1996.
- 4) Low levels of dissolved petroleum contamination exist in the groundwater at the Wilson Moving and Storage site.
- 5) VOC readings of soils indicate that adsorbed petroleum compounds exist in the soils in the immediate vicinity of the former tank pit and related piping. With the source UST removed, it is expected that adsorbed petroleum compound concentrations will continue to decrease over time with the progressive action of natural mitigative processes, including biodegradation, volatilization, and diffusion.
- 6) The groundwater flow beneath the site is estimated to be to the east at a hydraulic gradient of 5.2%. On November 26, 1996, the depth to groundwater at the site was approximately 8 feet below grade.
- 7) Based on a survey of known potential sensitive receptors in the vicinity of the site, Moon Brook is the only receptor at the site potentially at risk. However, based on the analytical results from MW3, and from visual observations of the brook, there appears to be no impact. There are no other receptors in the area that appear to be at significant risk of petroleum contamination from the subsurface petroleum contamination detected at the site.

V. RECOMMENDATIONS

Based on the above conclusions, Griffin recommends an additional confirmation round of groundwater sampling in three months. The next sampling should be scheduled for March 1997. If the results of the next groundwater sampling round are the same or lower than the current detections, Griffin will recommend the site for closure.

REFERENCES

1. Stewart, David P., 1972, *Geology for Environmental Planning in the Rutland-Brandon Region, Vermont*, State of Vermont, Water Resources Department.

APPENDIX A

**Site Location Map
Site Map
Groundwater Elevation Map**



JOB #: 9964919

SOURCE: USGS- RUTLAND, VERMONT QUADRANGLE



WILSON MOVING AND STORAGE

RUTLAND,

VERMONT

SITE LOCATION MAP

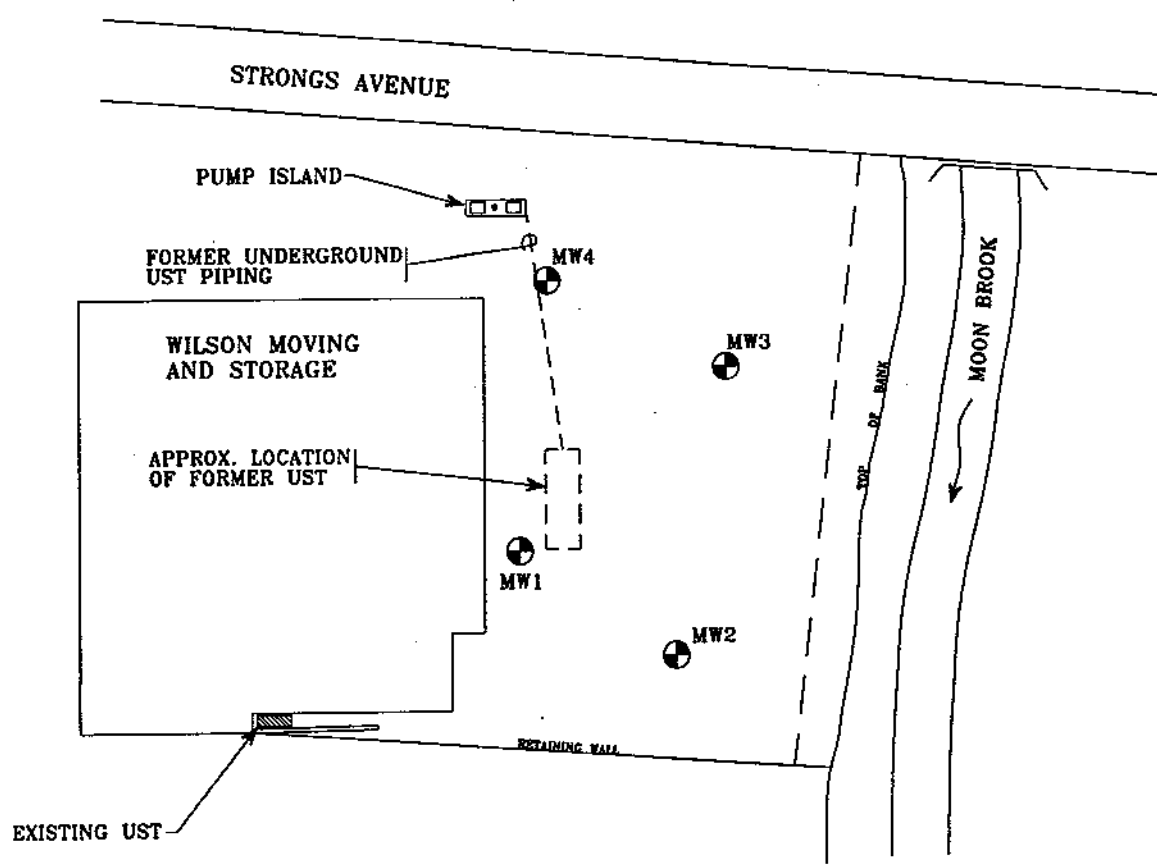
DATE: 12/10/96

DWG. #:1

SCALE: 1:24000

DRN.:SB

APP.:ES



LEGEND



MONITORING WELL

APPROX. LOCATION OF SEWER LINE

JOB #: 9964919



WILSON MOVING AND STORAGE
RUTLAND, VERMONT

SITE MAP

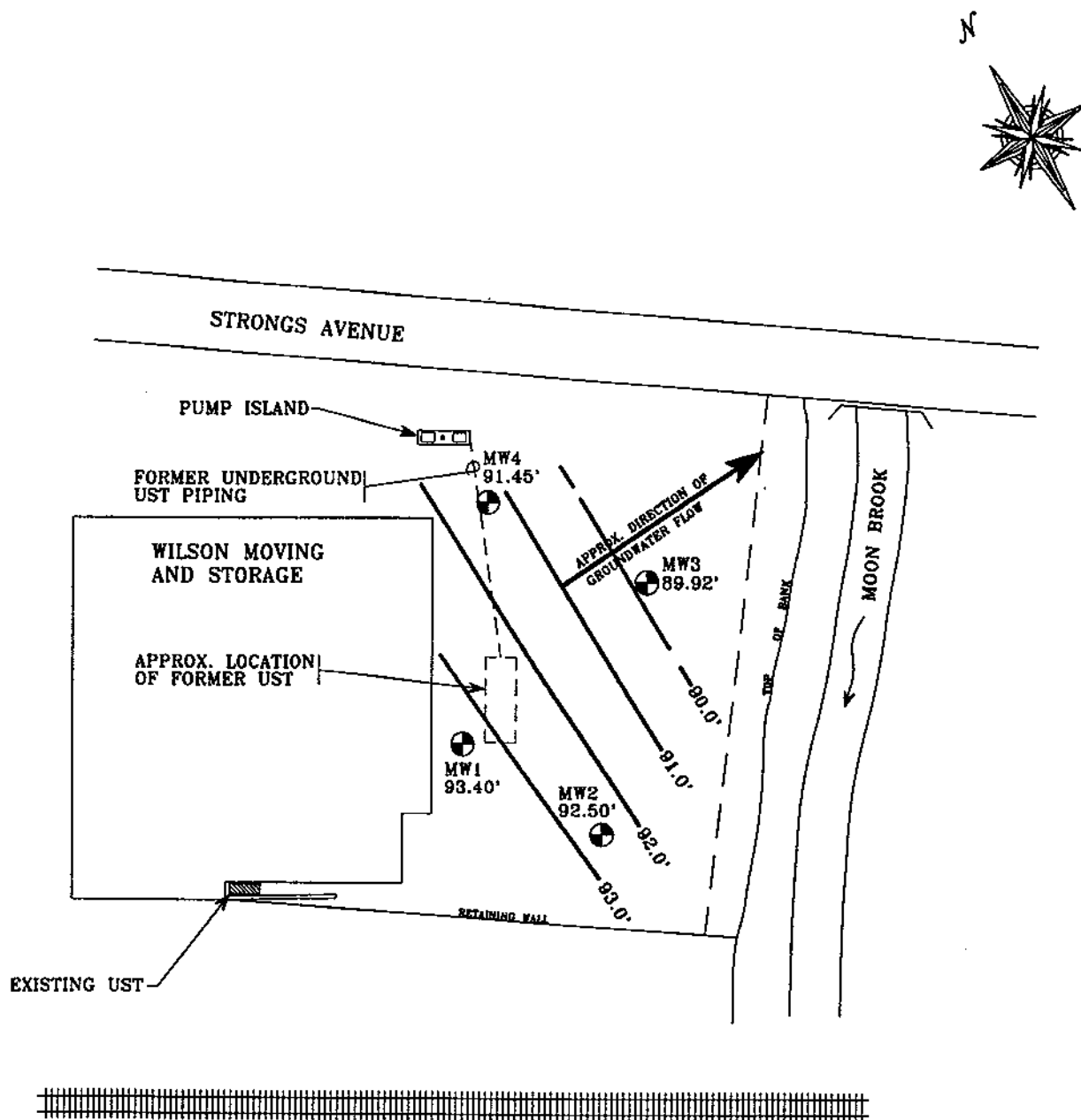
DATE: 12/6/96

DWG. #: 2

SCALE: 1"=50'

DRN.:SB

APP.:ES



LEGEND

MW2 92.50' MONITORING WELL AND WATER TABLE ELEVATION IN FEET

92.0' GROUNDWATER CONTOUR IN FEET (DASHED WHERE INFERRED)

--- APPROX. LOCATION OF SEWER LINE

JOB #: 9964919

MEASUREMENT DATE: 11/26/96



WILSON MOVING AND STORAGE

RUTLAND,

VERMONT

GROUNDWATER CONTOUR MAP

DATE: 12/10/96

DWG.#: 2

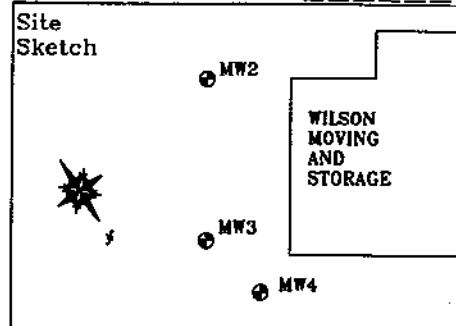
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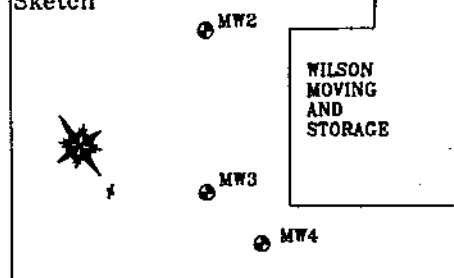
APPENDIX B

Soil Logs and Monitoring Well Specifications

PROJECT WILSON MOVING AND STORAGELOCATION RUTLAND, VERMONTDATE DRILLED 11/20/96 TOTAL DEPTH OF HOLE 15'DIAMETER 2.5"SCREEN DIA. 1.5" LENGTH 10' SLOT SIZE 0.010"CASING DIA. 1.5" LENGTH 3.5' TYPE sch 40 pvcDRILLING CO. ADAMS CONST. DRILLING METHOD VIBRATORYDRILLER GERRY ADAMS LOG BY C. WARDWELL NUMBER MW2

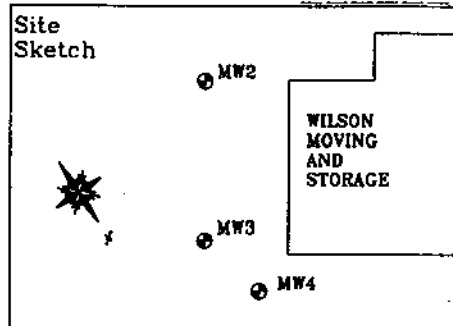
GRIFFIN INTERNATIONAL, INC

DEPTH IN FEET	WELL CONSTRUCTION	NOTES	BLOWS PER 6" OF SPOON & PID READINGS	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)	DEPTH IN FEET
0	ROAD BOX				0
1	COMPRESSION CAP				1
2	CONCRETE				2
3	BENTONITE				3
4	WELL RISER		2'-5' 0.2 ppm	Dark brown, medium to fine SAND, little silt, fill material.	4
5					5
6	SAND PACK			Black to dark brown, coarse to medium SAND, some silt, little gravel, with small pieces of yellowed weathered rocks, fill.	6
7			5'-10' 0 ppm		7
8	WELL SCREEN			Grayish brown SILT, little clay, trace gravel, damp to wet.	8
9				8.8' WATER TABLE	9
10	NATIVE BACKFILL				10
11					11
12			10'-15' 0 ppm	Brownish tan, SILT, some gravel, dense, wet, mottled, large rocks.	12
13	BOTTOM CAP				13
14					14
15	UNDISTURBED NATIVE SOIL			BASE OF WELL AT 14' END OF EXPLORATION AT 15'	15
16					16
17					17
18					18
19					19
20					20
21					21
22					22
23					23
24					24
25					25

PROJECT WILSON MOVING AND STORAGELOCATION RUTLAND, VERMONTDATE DRILLED 11/20/96 TOTAL DEPTH OF HOLE 15'DIAMETER 2.5"SCREEN DIA. 1.5" LENGTH 10' SLOT SIZE 0.010"CASING DIA. 1.5" LENGTH 4' TYPE sch 40 pvcDRILLING CO. ADAMS CONST. DRILLING METHOD VIBRATORYDRILLER GERRY ADAMS LOG BY C. WARDWELL NUMBER MW3Site
Sketch

GRIFFIN INTERNATIONAL, INC

DEPTH IN FEET	WELL CONSTRUCTION	NOTES	BLOWS PER 6" OF SPOON & PID READINGS	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)	DEPTH IN FEET
0	ROAD BOX				0
1	COMPRESSION CAP				1
2	CONCRETE				2
3	BENTONITE				3
4	WELL RISER		2'-5' 0.2 ppm	Black, medium fine SAND, little gravel, loose, clump of brown sand at 3', some silt, fill.	4
5					5
6	SAND PACK			Black to dark brown, medium coarse SAND and GRAVEL, little silt, damp, fill material.	6
7			5'-10' 1.0 ppm		7
8	WELL SCREEN				8
9				9.5' WATER TABLE	9
10					10
11			10'-13' 2.0 ppm	Dark gray SILT, some gravel, trace debris, strands of black plastic, small brick like chips, fill.	11
12	NATIVE BACKFILL				12
13	BOTTOM CAP				13
14			13'-15' 0 ppm	Tan to light gray with orange (mottled) SILT and fine SAND, some gravel, stiff, 1" of coarse to fine gravel at 14'.	14
15	UNDISTURBED NATIVE SOIL			BASE OF WELL AT 14.5' END OF EXPLORATION AT 15'	15
16					16
17					17
18					18
19					19
20					20
21					21
22					22
23					23
24					24
25					25

PROJECT WILSON MOVING AND STORAGELOCATION RUTLAND, VERMONTDATE DRILLED 11/20/96 TOTAL DEPTH OF HOLE 15'DIAMETER 2.5"SCREEN DIA. 1.5" LENGTH 10' SLOT SIZE 0.010"CASING DIA. 1.5" LENGTH 3' TYPE sch 40 pvcDRILLING CO. ADAMS CONST. DRILLING METHOD VIBRATORYDRILLER GERRY ADAMS LOG BY C. WARDWELL NUMBER MW4Site
Sketch

GRIFFIN INTERNATIONAL, INC

DEPTH IN FEET	WELL CONSTRUCTION	NOTES	BLOWS PER 6" OF SPOON & PID READINGS	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)	DEPTH IN FEET
0		ROAD BOX			0
1		COMPRESSION CAP			1
2		CONCRETE			2
3		BENTONITE			3
4		WELL RISER	2'-5' 0.4 ppm	Dark brown, medium to coarse SAND and fine to coarse GRAVEL, some silt, loose, damp.	4
5			5'-6' 1.0 ppm	Gray to tan SILT and fine SAND, some gravel, stiff, damp.	5
6		SAND PACK			6
7			8'-9' 7.0 ppm	Black SILT and fine to coarse SAND, some fine to medium gravel, wet.	7
8		WELL SCREEN		8.5' WATER TABLE	8
9			9'-10' 8.0 ppm	Gray SILT, some fine sand, little fine to medium gravel, stiff, saturated, sheen.	9
10					10
11		NATIVE BACKFILL		Dark gray SILT and fine to coarse GRAVEL, little fine sand, trace clay, saturated, sheen on water.	11
12		BOTTOM CAP	10'-15' 30.0 ppm		12
13					13
14					14
15		UNDISTURBED NATIVE SOIL		BASE OF WELL AT 13.5' END OF EXPLORATION AT 15'	15
16					16
17					17
18					18
19					19
20					20
21					21
22					22
23					23
24					24
25					25

APPENDIX C

Liquid Level Measurements

Liquid Level Monitoring Data
Wilson Moving & Storage, Rutland, Vermont

11/26/96

Well I.D.	Well Depth btoc	Top of Casing Elevation	Depth To Product btoc	Depth To Water btoc	Product Thickness	Specific Gravity Of Product	Water Equivalent	Corrected Depth To Water	Corrected Water Table Elevation
MW-1	13.50	103.20	-	9.80					93.40
MW-2	13.45	100.00	-	7.50					92.50
MW-3	14.20	99.42	-	9.50					89.92
MW-4	13.00	99.10	-	7.65					91.45

All Values Reported in Feet

Top-of-Casing Elevations Measured in Feet Relative to MW-2 set at 100.00'

btoc - Below Top of Casing

APPENDIX D

Water Quality Data

**Groundwater Quality Summary
Wilson Moving & Storage
Rutland, Vermont**

MW-1

PARAMETER	Date of Sample Collection				Applicable Standard (ppb)
	11/26/96				
Benzene	ND > 1				5. a
Chlorobenzene	ND > 1				100. a
1,2-DCB	ND > 1				600. b
1,3-DCB	ND > 1				600. c
1,4-DCB	ND > 1				75. a
Ethylbenzene	ND > 1				680. d
Toluene	ND > 1				1,000. b
Xylenes	ND > 1				400. d
Total BTEX	ND				-
MTBE	ND > 10				40. c
BTEX+MTBE	ND				-

MW-2

PARAMETER	Date of Sample Collection				Applicable Standard (ppb)
	11/26/96				
Benzene	ND > 1				5. a
Chlorobenzene	ND > 1				100. a
1,2-DCB	ND > 1				600. b
1,3-DCB	ND > 1				600. c
1,4-DCB	ND > 1				75. a
Ethylbenzene	ND > 1				680. d
Toluene	121.				1,000. b
Xylenes	ND > 1				400. d
Total BTEX	121.				-
MTBE	ND > 10				40. c
BTEX+MTBE	121.				-

All Values Reported in ug/L (ppb)

ND>1 - None Detected above Detection Limit

MCL - E.P.A. Maximum Contaminant Level

HAL - Health Advisory Level

VGES - Vermont Groundwater Enforcement Standard

a - MCL and VGES

b - MCL

c - HAL

d - VGES

Groundwater Quality Summary
Wilson Moving & Storage
Rutland, Vermont

MW-3

PARAMETER	Date of Sample Collection				Applicable Standard (ppb)
	11/26/96				
Benzene	ND > 5				5. a
Chlorobenzene	ND > 5				100. a
1,2-DCB	ND > 5				600. b
1,3-DCB	ND > 5				600. c
1,4-DCB	ND > 5				75. a
Ethylbenzene	ND > 5				680. d
Toluene	120.				1,000. b
Xylenes	ND > 5				400. d
Total BTEX	120.				-
MTBE	ND > 50				40. c
BTEX+MTBE	120.				-

MW-4

PARAMETER	Date of Sample Collection				Applicable Standard (ppb)
	11/26/96				
Benzene	88.5				5. a
Chlorobenzene	ND > 50				100. a
1,2-DCB	ND > 50				600. b
1,3-DCB	ND > 50				600. c
1,4-DCB	ND > 50				75. a
Ethylbenzene	252.				680. d
Toluene	207.				1,000. b
Xylenes	1,010.				400. d
Total BTEX	1,558.				-
MTBE	ND > 500				40. c
BTEX+MTBE	1,558.				-

All Values Reported in ug/L (ppb)

ND>1 - None Detected above Detection Limit

MCL - E.P.A. Maximum Contaminant Level

HAL - Health Advisory Level

VGES - Vermont Groundwater Enforcement Standard

a - MCL and VGES

b - MCL

c - HAL

d - VGES

**Groundwater Quality Summary
Wilson Moving & Storage
Rutland, Vermont**

11/26/96

PARAMETER	Trip Blank	Equipment Blank	Duplicate of MW-3	Applicable Standard (ppb)
Benzene	ND > 1	No	ND > 5	5. a
Chlorobenzene	ND > 1	Sample	ND > 5	100. a
1,2-DCB	ND > 1		ND > 5	600. b
1,3-DCB	ND > 1	Disposable	ND > 5	600. c
1,4-DCB	ND > 1	Bailers	ND > 5	75. a
Ethylbenzene	ND > 1	Used	ND > 5	680. d
Toluene	ND > 1		99.6	1,000. b
Xylenes	ND > 1		ND > 5	400. d
Total BTEX	ND		99.6	-
MTBE	ND > 10		ND > 50	40. c
BTEX+MTBE	ND		99.6	-

All Values Reported in ug/L (ppb)

ND>1 - None Detected above Detection Limit

MCL - E.P.A. Maximum Contaminant Level

HAL - Health Advisory Level

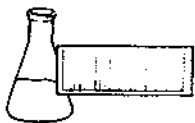
VGES - Vermont Groundwater Enforcement Standard

a - MCL and VGES

b - MCL

c - HAL

d - VGES



ENDYNE, INC.

Laboratory Services

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Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: Wilson Moving & Storage
REPORT DATE: December 5, 1996
DATE SAMPLED: November 26, 1996

PROJECT CODE: GIWM1129
REF.#: 97,269 - 97,274

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody indicated sample preservation with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times. All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method. Blank contamination was not observed at levels affecting the analytical results.

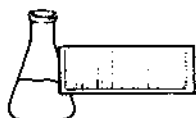
Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures

**ENDYNE, INC.****Laboratory Services**

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

EPA METHOD 8020--PURGEABLE AROMATICS**CLIENT:** Griffin International**DATE RECEIVED:** November 27, 1996**PROJECT NAME:** Wilson Moving & Storage**REPORT DATE:** December 5, 1996**CLIENT PROJ. #:** 9964919**PROJECT CODE:** GIWM1129

Ref. #:	97,269	97,270	97,271	97,272	97,273
Site:	Trip Blank	MW-2	MW-3	MW-1	MW-4
Date Sampled:	11/26/96	11/26/96	11/26/96	11/26/96	11/26/96
Time Sampled:	8:45	2:25	2:40	2:55	3:00
Sampler:	NI	NI	NI	NI	NI
Date Analyzed:	12/3/96	12/3/96	12/4/96	12/3/96	12/4/96
UIP Count:	0	0	0	1	>10
Dil. Factor (%):	100	100	20	100	2
Surr % Rec. (%):	103	108	119	123	96
Parameter	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)
Benzene	<1	<1	<5	<1	88.5
Chlorobenzene	<1	<1	<5	<1	<50
1,2-Dichlorobenzene	<1	<1	<5	<1	<50
1,3-Dichlorobenzene	<1	<1	<5	<1	<50
1,4-Dichlorobenzene	<1	<1	<5	<1	<50
Ethylbenzene	<1	<1	<5	<1	252.
Toluene	<1	121.	120.	<1	207.
Xylenes	<1	<1	<5	<1	1,010.
MTBE	<10	<10	<50	<10	<500

Ref. #:	97,274				
Site:	Duplicate				
Date Sampled:	11/26/96				
Time Sampled:	2:45				
Sampler:	NI				
Date Analyzed:	12/4/96				
UIP Count:	0				
Dil. Factor (%):	20				
Surr % Rec. (%):	110				
Parameter	Conc. (ug/L)				
Benzene	<5				
Chlorobenzene	<5				
1,2-Dichlorobenzene	<5				
1,3-Dichlorobenzene	<5				
1,4-Dichlorobenzene	<5				
Ethylbenzene	<5				
Toluene	99.6				
Xylenes	<5				
MTBE	<50				

Note: UIP = Unidentified Peaks TBQ = Trace Below Quantitation NI = Not Indicated

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CHAIN-OF-CUSTODY RECORD

GIA 996 4919

20028

Project Name: <i>Wilson Moving & Storage</i> Site Location: <i>Rutland, VT</i>	Reporting Address: <i>GRIFFIN</i>	Billing Address: <i>GRIFFIN</i>
Endyne Project Number: <i>GIWM1129</i>	Company: Contact Name/Phone #:	Sampler Name: Phone #:

[illegible]

Relinquished by: Signature <i>Christo Vland</i>	Received by: Signature <i>Boberto Conan</i>	Date/Time <i>11/27/96 9:35</i>
Relinquished by: Signature <i>Boberto Conan</i>	Received by: Signature <i>Ron Brown</i>	Date/Time <i>11/27/96 10:00 AM</i>

New York State Project: Yes No X

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										